play an important part. The Colorado and Green rivers will then become highways of commerce and trade.

Light and Power Industries

ELECTRIC LIGHT AND POWER

Early developments. The advent of electric lighting in Utah dates back to the year 1880. The Salt Lake Power, Light & Heating Company was organized that year for the purpose of manufacturing and distributing electric energy for commercial lighting and steam for heating and for propelling machinery. The electric energy distributed by this company was generated by means of a steam plant.

The Ogden City Electric Light Company was organized at Ogden in the same year. Provo received its first electric service in 1890 from the Provo Woolen Mills. This system was transferred in 1899 to an institution known as "The Electric Company."

During the following twenty years numerous other individual companies were formed in various cities and towns of the state, and in some instances the original companies changed ownership or became parts of reorganized companies.

First hydroelectric plant. Development of electrical energy from water power was first attempted in this territory in 1895. Among the early plants was one in Big Cottonwood Canyon and one on the Ogden River. In the fifteen years that followed, a number of small hydroelectric plants and systems were built, each serving a very limited section.

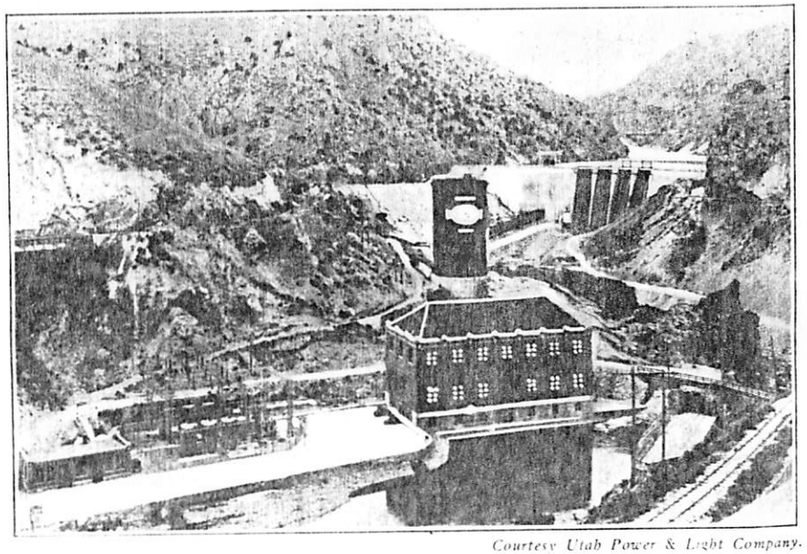
The rapid growth of the population of the state required increased power and light service. The capacity of the scattered individual plants with their restricted facilities was inadequate to meet the growing needs. To meet this situation a consolidation and inter-connection of a number of the large and small plants of the state took place, with the organization of the Utah Power & Light Company in 1912. This marked the beginning of a program of enlarging power plants, building news ones, and providing additional transmission lines and facilities. The transmission and distribution system of the Utah Power Company, in Utah consists of 3,990 miles of line, serves 211 towns and cities representing a population of 373,073.

By the inter-connection of these water power generating plants in Utah and Idaho with transmission lines, practically the entire generating capacity was "pooled," thereby creating a source of power supply so flexible in its nature that, should one plant fail in its operation, the remainder of the system would carry its load, thus preventing an interruption of service. Such a method of operation more nearly meets the demands that may arise at any season, or at any time of day or night. This system also provides for the regulation or equalization of the flow of stream upon which plants are located, which means that water is stored in reservoirs during high water seasons and released to permit of normal operation during low water season for irrigation or power purposes.

To augment the power which is generated at the water power plants, and to serve as an emergency source of power supply, the Utah Power & Light

Company maintains its Jordan steam plant, located in Salt Lake City on the banks of the Jordan River. This plant, which can generate 55,000 horsepower of electricity, is a part of the inter-connected system, and is placed in operation whenever it is necessary to provide additional service, due to water shortage, or for any other reason.

The present inter-connected system of the Utah Power & Light Company extends from Ashton, Idaho on the north, to Emery, Utah on the south, a distance of about 460 miles. Practically all of the intervening territory, of which the maximum width is about seventy-five miles, is served. The largest of its Utah hydroelectric plants is located at Cutler on the Bear River, about



Courtesy Utah Power & Light Company.

FIGURE 126—A modern power plant.

seventeen miles northwest of Logan. This plant has generating capacity of about 40,000 horsepower. Other water power plants of smaller capacity are located on various streams in the state, in addition to which is the Jordan steam plant already mentioned.

Telluride Power Company. Beyond the territory served by the Utah Power & Light Company on the south, is the Telluride Power Company and its subsidiary, the Big Springs Power Company. The Telluride Power Company, incorporated in 1917, serves thirty-one cities and towns in the counties of Beaver, Sevier, Piute, Sanpete, Millard, and Garfield, and also light and power service to farms, mines, and other territory outside the corporate limits of the cities and towns served. The Big Springs Power Company serves three towns in Sanpete County, and furnishes power for resale to three other towns. The combined transmission and distribution systems of the two companies consist

of 761 miles of lines. Electric energy is generated by hydroelectric plants for distribution by these companies.

Southern Utah Power Company. The southwestern part of the state is furnished electricity by the Southern Utah Power Company. It serves twenty cities and towns in Iron and Washington counties, over a transmission and distribution system of 257 miles. Its electric energy is produced by hydroelectric and Diesel oil power generating units.

Uintah Power and Light Company. In the eastern part of Utah the Uintah Power & Light Company furnishes light and power service to nine cities and towns in Duchesne and Uintah counties. Its electric energy is generated by an hydroelectric plant.

In addition to the companies named above, there are several small power and light utilities serving small communities in various parts of the state. Most of them are distributing companies only, receiving electric energy from larger power-producing companies for resale.

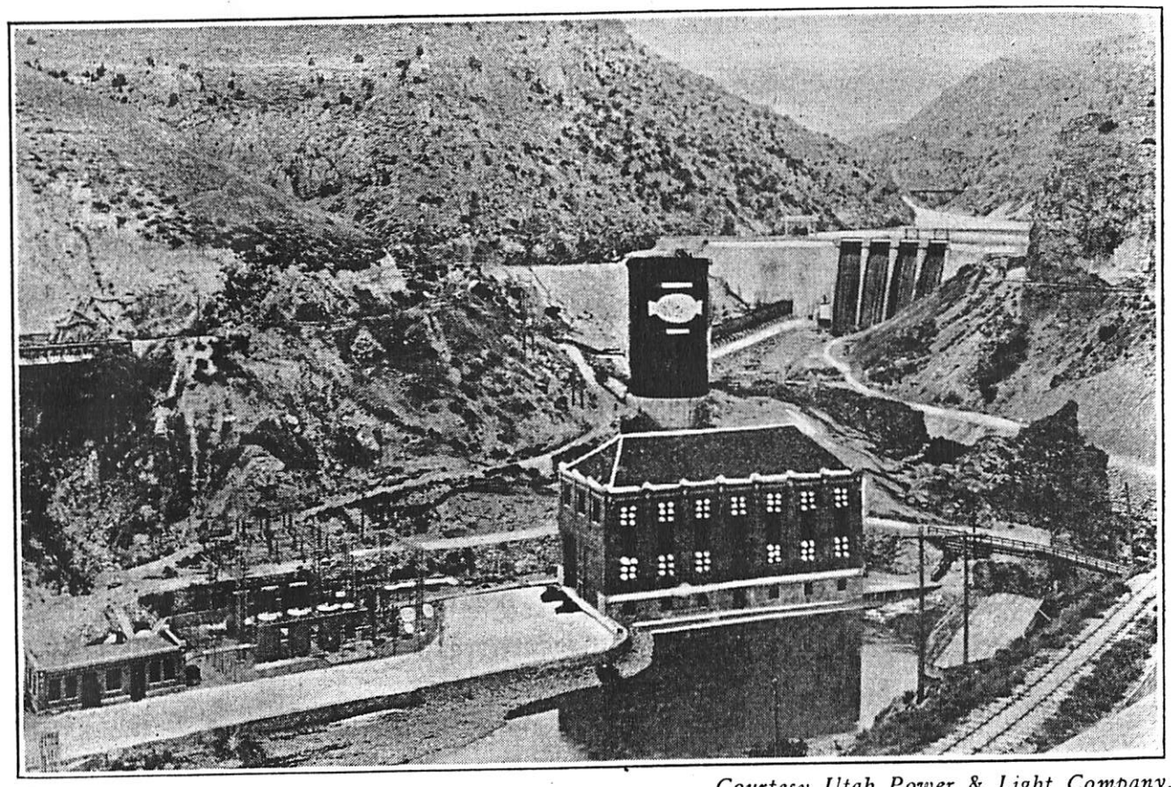
The three major power-producing companies of the state—Utah Power & Light Company, Telluride Power Company, and Southern Utah Power Company—are inter-connected so that it is possible to transmit power from one company's lines to another. Through this inter-connection the possibility of a shut-down in power service is greatly lessened in the territory served by these companies.

Municipal power plants. A number of cities and towns of Utah have constructed and now operate their own power and lighting systems. In some cases the power developed is used for street lighting alone and in other cases all the power and light requirements of the cities are met by these municipal plants. Among the cities and towns having municipal plants are: Beaver, Brigham, Ephraim, Heber, Hyrum, Lehi, Logan, Manti, Monroe, Mt. Pleasant, Murray, Nephi, Parowan, and Springville.

The electric generating system of these municipalities consist, in the majority of cases, of hydroelectric power plants, which are supplemented in a few installations with Diesel engine generating units. The aggregate generating capacity of the plants of these several municipalities is in excess of 11,250 horsepower. The transmission and distribution systems consist of approximately 450 miles of transmission lines, which serve over 12,300 customers in the above named communities. These customers, in turn, represent a combined population of 44,600 people.

The facilities of these municipal power plants are sufficient to take care of the present requirements, except in a few instances where supplementary power must be obtained from other sources during low water season.

Utah today is known as one of the intensely electrified sections of the United States, and particularly for the great extent to which electricity is used on its farms. On January 1, 1932 Utah ranked third among all the states in the Union in percentage of electrified farms. The privately owned power and light companies at present maintain and operate thirty-seven generating stations, including hydro, steam, and gas power plants. The transmission and distribution systems embody approximately 6,000 miles of lines. The industry affords employment to 1560 people, with an annual pay roll in excess of $2,100,000.



Courtesy Utah Power & Light Company.

FIGURE 126—A modern power plant.

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